

<b>Notice of Allowability</b>	Application No.	Applicant(s)
	10/776,817	TAWFIQ ET AL.
	Examiner	Art Unit
	Charles Kim	2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTO-85) or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to submissions received on September 6, 2006.
2.  The allowed claim(s) is/are 16-46 (renumbered as claims 1-31 accordingly).
3.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All
  - b)  Some\*
  - c)  None
  1.  Certified copies of the priority documents have been received.
  2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5.  CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_\_.
  - (b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

#### Attachment(s)

1.  Notice of References Cited (PTO-892)
2.  Notice of Draftsperson's Patent Drawing Review (PTO-948)
3.  Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4.  Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5.  Notice of Informal Patent Application
6.  Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7.  Examiner's Amendment/Comment
8.  Examiner's Statement of Reasons for Allowance
9.  Other \_\_\_\_\_.

WU  
PRIMARY EXAMINER

## DETAILED ACTION

### *Allowable Subject Matter*

1. Claims 16-46 are allowed.

### *Reasons for Allowance*

2. The following is an examiner's statement of reasons for allowance:

Regarding claims 16 and 17, the essential difference from the prior art is determining the density of the slurry as a function of a comparison between the measured buoyant weight of the camera in the slurry and the reference weight of the camera in the air. These features in combination with the other elements of the claim and the base claim are not disclosed or suggested by the prior art of record.

Regarding claim 32, the essential difference from the prior art is determining an amount of a deposit—"debris such as sedimentary deposits located [at] the bottom of the borehole" (Arguments, page 10)—as a function of the measured penetration resistance of the probe. These features in combination with the other elements of the claim and the base claim are not disclosed or suggested by the prior art of record.

Regarding claim 46, the essential difference from the prior art is measuring penetration at a bottom of a borehole with a probe that comprises a graduated bar protruding from the housing and connected to the housing by a spring, and bar being in the viewing area of the camera. These features in combination with the other elements of the claim and the base claim are not disclosed or suggested by the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Citation of Relevant Prior Art***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Head U.S. Patent No. 5,379,216 discloses a system for inspecting a borehole that determines the volume of deposit based on the *electrical* resistance of the deposit (col. 11, lines 54-60).

b. Ciglenec et al., U.S. Patent No. 6,164,126 discloses a probe for measuring penetration on a bottom of a borehole comprising a spring mechanism.

c. Shwe et al., U.S. Patent No. 5,587,525 discloses a system for determining the volume of deposit in a bottom of a borehole.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Kim whose telephone number is 571-272-7421. The examiner can normally be reached on Mon thru Thurs 8:30am to 6pm and alternating Fri 9:30am to 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on 571-272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-272-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ck  
ck  
October 3, 2006

JINGGE WU  
PRIMARY EXAMINER

